

CLAIMS

1. A solenoid valve with a terminal box comprising a solenoid valve for driving a valve member by energization of an exciting coil to select a fluid flow path and a terminal box detachably mounted to the solenoid valve,

wherein the solenoid valve includes a first mounting face and a second mounting face to be mounted with the terminal box, adjacent to each other, and orthogonal to each other, the first mounting face is provided with a plurality of terminal holes in which coil terminals in continuity with the exciting coil are housed and a screw hole into which a fixing screw for the terminal box is screwed, the second mounting face is provided with an elastic clip having hooks for locking the terminal box,

the terminal box is formed into a substantially L-shaped bent form and includes a first portion for covering at least a part of the first mounting face of the solenoid valve and a second portion for covering at least a part of the second mounting face, the first portion is provided with a plurality of connecting terminals to be fitted into the terminal holes to be connected to the coil terminals, a connector having a plurality of receiving terminals to be brought into continuity with the connecting terminals, and a screw insertion hole through which the fixing screw is inserted, and the second portion is provided with locking holes into which the hooks of the elastic clip are locked.

2. A solenoid valve with a terminal box according to claim 1, wherein the first portion of the terminal box covers the whole of the first mounting face of the solenoid valve and the second portion covers the whole of the second mounting face.

3. A solenoid valve with a terminal box according to claim 1, wherein a printed

board for bringing the receiving terminals and the connecting terminals into continuity with each other and a gasket for surrounding peripheries of the connecting terminals are housed in the first portion of the terminal box, the printed board is encapsulated in transparent resin together with an indicating lamp and an electronic components mounted on the printed board, the gasket is pressed against peripheries of the terminal holes of the solenoid valve to seal the terminal holes, and an indicating window from which the indicating lamp is observed through the transparent resin is provided in a position of the terminal box corresponding to the indicating lamp.

4. A solenoid valve with a terminal box according to claim 1, wherein a part of the first mounting face of the solenoid valve is formed of a magnetic material cover also functioning as a magnetic frame covering the exciting coil, the connector has a grounding terminal, and the grounding terminal is in contact with the magnetic material cover through the conductive spring.

5. A solenoid valve with a terminal box according to claim 1, wherein the elastic clip is detachably mounted to the second mounting face of the solenoid valve through the clip holder.

6. A solenoid valve with a terminal box according to claim 3, wherein a part of the first mounting face of the solenoid valve is formed of a magnetic material cover also functioning as a magnetic frame covering the exciting coil, the connector has a grounding terminal, and the grounding terminal is in contact with the magnetic material cover through the conductive spring.

7. A solenoid valve with a terminal box according to claim 3, wherein the elastic

clip is detachably mounted to the second mounting face of the solenoid valve through the clip holder.

8. A solenoid valve with a terminal box according to claim 4, wherein the elastic
5 clip is detachably mounted to the second mounting face of the solenoid valve through the clip holder.

9. A solenoid valve with a terminal box according to claim 5, wherein the elastic
clip is detachably mounted to the second mounting face of the solenoid valve
10 through the clip holder.